

IN THE CLAIMS:

Please cancel Claims 23 and 34 without prejudice or disclaimer of subject matter, and amend the claims as shown below. The claims, as pending in the subject application, read as follows:

1. to 20. (Canceled)

21. (Currently Amended) A data communication system comprising a first data communication unit, and a second data communication unit communicating with said first data communication unit, one of said first and second data communication units comprising:

a deciding unit adapted to decide a fixed packet length based upon information related to an upper limit packet length in which a packet is capable of being transferred by said second data communication unit, and information related to an allowable packet length in which a packet is allowable of being transferred by said first data communication unit, [[and]]

wherein said first communication unit comprises:

a generating unit adapted to generate a plurality of packets having said fixed packet length decided by said deciding unit, by dividing variable length data to be transferred from said first data communication unit to said second data communication unit into the plurality of packets;

a storage unit adapted to store the plurality of packets generated by said generating unit; and

a DMA controller adapted to control DMA transfer of the plurality of packets having said fixed packet length stored in said storage unit to said second data communication unit, and

wherein said fixed packet length decided by said deciding unit is the smaller of said upper limit packet length and said allowable packet length.

22. (Previously Presented) The system according to claim 21, wherein said generating unit adds to each of the plurality of packets having said fixed packet length, information indicating whether the packet is a final packet.

23. (Canceled)

24. (Previously Presented) The system according to claim 21, wherein said first data communication unit further comprises a first serial communication controller for controlling serial communication with a second serial communication controller of said second data communication unit, said first serial communication controller converting the packets transferred by said DMA controller to a bit string and outputting said bit string to said second serial communication controller.

25. (Previously Presented) The system according to claim 21, wherein said first data communication unit receives the information related to the upper limit packet length which is receivable by said second data communication unit, from said second data communication unit when said first data communication unit comprises said deciding unit, or said second data communication unit receives the information related to the allowable packet length from said first data communication unit when said second data communication unit comprises said deciding unit.

26. and 27. (Canceled)

28. (Previously Presented) The system according to claim 21, wherein said deciding unit decides said fixed packet length in response to initialization of said data communication system.

29. (Previously Presented) The system according to claim 21, wherein said DMA controller further controls DMA transfer of the plurality of packets having said fixed packet length transmitted from said second data communication unit, to said storage unit.

30. (Canceled)

31. (Previously Presented) The system according to claim 21, wherein said first data communication unit further comprises an image input unit for inputting image data, and said second data communication unit further comprises an image processing unit for processing image data input by said image input unit.

32. (Currently Amended) A data communication device for communicating with another data communication device, comprising:

a deciding unit adapted to decide a fixed packet length based upon information related to an upper limit packet length which is capable of being transferred by said another data communication device, and information related to an allowable packet length in which a packet is allowable of being transferred by said data communication device;

a generating unit adapted to generate a plurality of packets having said fixed packet length decided by said deciding unit, by dividing variable length data to be transferred from said data communication device to said another data communication device into the plurality of packets;

a storage unit adapted to store the plurality of packets generated by said generating unit; and

a DMA controller adapted to control DMA transfer of the plurality of packets having said fixed packet length stored in said storage unit, to said another data communication device,

wherein said fixed packet length decided by the deciding unit is the smaller of said upper limit packet length and said allowable packet length.

33. (Previously Presented) The device according to claim 32, wherein said generating unit adds to each of the plurality of packets having said fixed packet length, information indicating whether the packet is a final packet.

34. (Canceled)

35. (Previously Presented) The device according to claim 32, further comprising a first serial communication controller for controlling serial communication with a second serial communication controller of said another data communication device, wherein said first serial communication controller converts the packets transferred by said DMA controller to a bit string and outputs said bit string to said second serial communication controller.

36. (Previously Presented) The device according to claim 32, wherein said data communication device receives said information related to the upper limit packet length which is receivable by said another data communication device, from said another data communication device.

37. and 38. (Canceled)

39. (Previously Presented) The device according to claim 32, wherein said deciding unit decides said fixed packet length in response to initialization of said data communication device.

40. (Previously Presented) The device according to claim 32, wherein said DMA controller further controls DMA transfer of the plurality of packets having said fixed packet length transmitted to said another data communication device, to said storage unit.

41. (Canceled)

42. (Currently Amended) A data communication method for communication between a first data communication unit and a second data communication unit, comprising the steps of:

a deciding step of deciding a fixed packet length based upon information related to an upper limit packet length which is capable of being transferred by said second data communication unit and information related to an allowable packet length in which a packet is allowable of being transferred by said first data communication unit;

a generating step of generating a plurality of packets having said fixed packet length, by dividing variable length data to be transferred from said first data communication unit to said second data communication unit into the plurality of packets;

a storing step of storing the plurality of packets generated in said generating step to a storage unit of said first data communication unit; and

a control step of controlling DMA transfer of the plurality of packets having said fixed packet length stored in said storage unit from said first data communication unit to said second data communication unit,

wherein said fixed packet length decided by the deciding step is the smaller of said upper limit packet length and said allowable packet length.